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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,627	08/06/2003	Yasuo Iwahashi	FUJI 20.564	8463

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EXAMINER	
LE, LANA N	

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/635,627	IWAHASHI ET AL.	
	Examiner	Art Unit	
	Lana N. Le	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 3/28/06

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-11 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) 11 is/are allowed.

6)☒ Claim(s) 1-4,6-7,10 is/are rejected.

7)☒ Claim(s) 5,8-9 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 6-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalgleish et al (US 5,548,643) in view of Kumagai (US 5,754,949) and further in view of Pande et al (US 2002/0,065,052).

Regarding claim 1, Dalgleish et al disclose an outdoor radio equipment (outdoor base station), comprising:

a radio transmitting and receiving part (transmitting and receiving module 14; col 5, lines 9-65);

a common part (interface module 12) for controlling an action of the radio transmitting and receiving part (14) wherein the radio transmitting and receiving part (14) is provided at the common part (12) so as to be exposed to open air (col 6, lines 6-35; col 11, line 58 – col 12, line 20). Dalgleish et al do not disclose performing a modulation and demodulation process. Kumagai et al disclose performing a modulation and demodulation process (via DEM/MOD 12, 13; fig. 10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the outdoor

unit perform performing a modulation and demodulation process in order to map transmitting information into signal waveforms by varying amplitude, phase or frequency during modulation and to reduce the waveforms into an estimate of transmitted data symbols during demodulation as is well known in the art.

Dalgleish et al and Kumagai do not disclose at least part of an external surface of the radio transmitting and receiving part is exposed to open air. Pande et al disclose at least part of an external surface of the radio transmitting and receiving part is exposed to open air (holes for exposure and heat radiation to atmosphere within the outer surface of a transceiver which serves as a heat sink; paras. 14, 39, 46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have holes within the heat sink/transceiver to have contact with the open atmosphere to allow heat dissipation from the transceiver.

Regarding claim 2, Dalgeish et al, Kumagai, and Pande et al disclose the outdoor radio equipment as claimed in claim 1, wherein Dalgeish et al disclose a plurality of the radio transmitting and receiving part is provided at the common part (col 11, lines 62-65).

Regarding claim 3, Dalgeish et al, Kumagai, and Pande et al disclose the outdoor radio equipment as claimed in claim 1, wherein Dalgeish et al disclose the common part (12; fig. 2) includes first interface part for the transmitting and receiving part including a first connector (20) (col 5, lines 14-23), the radio transmitting and receiving part includes a second interface part for the common part including a second connector (22), the second interface part is provided at a side, where the common part (12) is provided, of

the radio transmitting and receiving part (col 5, lines 27-43), and the radio transmitting and receiving part is electrically connected to the common part by engaging the second connector of the second interface part with the first connector of the first interface part (col 5, lines 16-21; lines 33-43).

Regarding claim 4, Dalgeish et al, Kumagai, and Pande et al disclose the outdoor radio equipment as claimed in claim 3, wherein Dalgeish et al disclose at least one of the second connector of the second interface part and the first connector of the first interface part is floatably supported in an installation surface (see fig. 2; col 5, lines 16-43).

Regarding claim 6, Dalgeish et al, Kumagai, and Pande et al disclose the outdoor radio equipment as claimed claim 1, wherein Dalgeish et al disclose the radio transmitting and receiving part (14) includes a housing (30, 32, 54) (col 5, lines 47-53), electrical equipment (electrical components within 68, 70) is provided inside the housing of the radio transmitting and receiving part (col 6, lines 23-26), a radiation heat member (66) is provided at a side to be installed to the common part (12) of the housing of the radio transmitting and receiving part (col 6, lines 33-35), the electrical equipment comes in contact with the housing or the radiation heat member directly or indirectly (col 11, lines 65- col 12, line 2), and the heat from the electrical equipment transferred to open air via the housing or the radiation heat member (col 6, lines 31-35).

Regarding claim 7, Dalgeish et al, Kumagai, and Pande et al disclose the outdoor radio equipment as claimed in claim 6, wherein Dalgeish et al disclose a gap (58, 220) is formed between the radiation heat member provided at the housing part (30) and the

common part (12) when the radio transmitting and receiving part (14) is installed to the common part (12) (figs. 4, 13; col 12, lines 13-20).

Regarding claim 10, Dalgeish et al, Kumagai, and Pande et al disclose the outdoor radio equipment as claimed in claim 6, wherein Dalgeish et al disclose the electronic equipment (44) provided at the housing of the radio transmitting and receiving part includes an electric power source part for supplying an electric power to electronic components (within circuit board 50) provided at the radio transmitting and receiving part (14) (col 6, lines 6-8), the transmitting part for converting information to signal to be transmitted, the receiving part for converting a received signal to information. Dalgeish et al do not disclose a modulation and demodulation part for modulating and demodulating a signal wave.

Kumagai et al disclose the radio unit having a modulation (MOD 13; fig. 10) and demodulation part (DEM 12; fig. 10) for modulating and demodulating a signal wave. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the outdoor unit have a modulation and demodulation part in order to map transmitting information into signal waveforms by varying amplitude, phase or frequency during modulation and to reduce the waveforms into an estimate of transmitted data symbols during demodulation as is well known in the art.

Dalgeish et al and Kumagai do not disclose a microwave transmitting and receiving part. However, it is notoriously well known to have a microwave transmitting and receiving part. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a microwave transmitting and receiving part to enhance

the outdoor base station with the capability to receive and transmit more frequencies in the high range.

Allowable Subject Matter

3. Claim 11 is allowable over the cited prior art.

4. The following is an examiner's statement of reasons for allowance:

Regarding claim 11, Dalgeish et al disclose a radio unit (14), the radio unit being installed to common part (12) which has a function of transmitting and receiving a radio signal via an antenna (col 2, lines 25-31) and a substantially box-type configuration (see fig. 1), the radio unit (14) comprising a second connector part (22; fig. 2) which is engaged with a first connector part (20) of a side surface of the common part (12) when Kumagai discloses a radio unit having a modulation and demodulation part (12, 13) for performing a demodulation process of an input radio signal.

However, Dalgeish et al, Kumagai and the cited prior art fail to disclose outputting the demodulated signal to the common part, performing a modulation process by using another radio signal input from the common part, and outputting a modulated wave to the common part; the modulation and demodulation part is installed to the common part and which transmits and receives signal including the radio signal, an installation part for installing the modulation and demodulation part to the side surface of the common

part, and radiation heat structure for preventing an temperature from increasing in the modulation and demodulation part.

5. Claims 5 and 8-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 5, Dalgeish et al and Kumagai disclose the outdoor radio equipment as claimed in claim 3, wherein Dalgeish et al, Kumagai and the cited prior art fail to disclose a waterproof member is provided at a surface where the second interface part of the radio transmitting and receiving part comes in contact with the first interface part of the common part.

Regarding claim 8, Dalgeish et al and Kumagai disclose the outdoor radio equipment as claimed in claim 3, wherein the radio transmitting and receiving part includes a shaft member, the shaft member is provided at an upper part of the side where the radio transmitting and receiving part is installed to the common part, the common part includes a bearing part, the bearing part is provided at an upper part of the side where the common part is installed to the radio transmitting and receiving part, and the shaft member is hung in the bearing part and rotated, so that the radio transmitting and receiving part is connected to the common part.

Regarding claim 9, Dalgeish et al and Kumagai disclose the outdoor radio equipment as claimed in claim 1, wherein Dalgeish et al, Kumagai and the cited prior art do not disclose the common part includes an electric power source part for converting a first electric power source to a second electric power source and supplying electric

power to electronic components provided at the common part, a control part for monitoring the radio transmitting and receiving part installed to the common part, and controlling a branching part for selecting a signal and distributing the signal to the radio transmitting and receiving part, and a switching part for switching one of a plurality of the radio transmitting and receiving parts installed to the common part.

Response to Arguments

6. Applicant's arguments and amendments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N. Le whose telephone number is (571) 272-7891. The examiner can normally be reached on M-F 9:30-18:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

6-06-06
LANA LE
PRIMARY EXAMINER

Lana Le